

## PATENT COOPERATION T. ATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents  
 United States Patent and Trademark  
 Office  
 Box PCT  
 Washington, D.C.20231  
 ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

<b>Date of mailing (day/month/year)</b> 18 July 2000 (18.07.00)	<b>Applicant's or agent's file reference</b> WO 4202 PCT
<b>International application No.</b> PCT/EP99/09850	<b>Priority date (day/month/year)</b> 22 December 1998 (22.12.98)
<b>International filing date (day/month/year)</b> 13 December 1999 (13.12.99)	
<b>Applicant</b> HECO, André et al	

1. The designated Office is hereby notified of its election made:



in the demand filed with the International Preliminary Examining Authority on:

17 June 2000 (17.06.00)



in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

<b>The International Bureau of WIPO</b> 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	<b>Authorized officer</b>  S. Mafla Telephone No.: (41-22) 338.83.38
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## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>WO 4202 PCT</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/EP 99/ 09850</b>	International filing date (day/month/year) <b>13/12/1999</b>	(Earliest) Priority Date (day/month/year) <b>22/12/1998</b>
Applicant <b>GLAVERBEL et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

## 4. With regard to the title,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

## 5. With regard to the abstract,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.



None of the figures.

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 99/09850

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C03C3/087 C03C4/02 C03C4/08 C03C17/245 C03C17/34

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C03C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 196 36 301 A (GLAVERBEL) 13 March 1997 (1997-03-13) page 5, line 2 - line 6 page 5, line 32 - line 39 claims; examples 6-9,11,12 ---	1,25-27
X	DE 196 36 303 A (GLAVERBEL) 13 March 1997 (1997-03-13) page 5, line 23 - line 25 claims; examples ---	1-3,5,23
X	GB 2 302 101 A (GLAVERBEL) 8 January 1997 (1997-01-08) cited in the application claims; example 2; table A ---	1-3, 13-18, 22-24,27
	-/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

7 April 2000

Date of mailing of the international search report

18/04/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Kuehne, H-C

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 99/09850

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 2 302 102 A (GLAVERBEL) 8 January 1997 (1997-01-08) cited in the application claims; examples ---	1-3, 13-18, 22, 27
A	FR 2 579 588 A (GLAVERBEL) 3 October 1986 (1986-10-03) claims; examples ---	1-27
A	EP 0 482 535 A (PPG INDUSTRIES INC) 29 April 1992 (1992-04-29) claims; examples ---	1-27
A	EP 0 353 140 A (SAINT GOBAIN VITRAGE) 31 January 1990 (1990-01-31) claims; figures ---	1-27
A	GB 2 248 243 A (GLAVERBEL) 1 April 1992 (1992-04-01) cited in the application the whole document -----	1-27

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Information on patent family members

International Application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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Information on patent family members

International Application No

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Date of the actual completion of the international search

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Date of mailing of the international search report

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Name and mailing address of the ISA

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NL - 2280 HV Rijswijk  
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Fax: (+31-70) 340-3016

Authorized officer

Kuehne, H-C



# INTERNATIONAL SEARCH REPORT

Int. Application No

PCT/EP 99/09850

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Information on patent family members

Intern. Application No

PCT/EP 99/09850

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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Information on patent family members

International Application No

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International Application No

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# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>WO 4202 PCT</b>		<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. <b>PCT/EP99/09850</b>	International filing date (day/month/year) <b>13/12/1999</b>	Priority date (day/month/year) <b>22/12/1998</b>
International Patent Classification (IPC) or national classification and IPC <b>C03C3/087</b>		
Applicant <b>GLAVERBEL et al.</b>		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 7 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>		
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <li>I <input checked="" type="checkbox"/> Basis of the report</li> <li>II <input type="checkbox"/> Priority</li> <li>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li>IV <input type="checkbox"/> Lack of unity of invention</li> <li>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li>VI <input type="checkbox"/> Certain documents cited</li> <li>VII <input type="checkbox"/> Certain defects in the international application</li> <li>VIII <input checked="" type="checkbox"/> Certain observations on the international application</li> </ul>		
Date of submission of the demand <b>17/06/2000</b>		Date of completion of this report <b>02.04.2001</b>
Name and mailing address of the international preliminary examining authority:  <b>European Patent Office</b> <b>D-80298 Munich</b> <b>Tel. +49 89 2399 - 0 Tx: 523656 epmu d</b> <b>Fax: +49 89 2399 - 4465</b>		Authorized officer  <b>Maurer, R</b>  Telephone No. <b>+49 89 2399 8578</b> 

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/EP99/09850

**I. Basis of the report**

1. With regard to the elements of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, pages:**

1-28 as originally filed

**Claims, No.:**

1-27 as originally filed

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

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*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes:	Claims	4-12, 19-24 yes
	No:	Claims	1-3, 13-18, 25-27 no
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-27 no
Industrial applicability (IA)	Yes:	Claims	1-27 yes
	No:	Claims	

2. Citations and explanations  
**see separate sheet**

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
**see separate sheet**

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International application No. PCT/EP99/09850

1) Reference is made to the following documents:

D1 DE-A-19636301

D2 DE-A-19636303 (cited in the application page 6, line 26)

D3 GB-A-2302101 ( " " " " " )

D4 GB-A-2302102

D6 EP-A-0482535.

**SECTION V**

2) The applicant's arguments as regards D1 are not convincing as D1 discloses values of  $TL/TE = S$  being inside the range according to claim 1 of the present application. As the composition of neither the coating nor of the colorants is defined in claim 1 of the present application, any coating composition, e.g. the one according to D1, would cover such an undefined coating colorant composition and thus would be novelty destroying. Accordingly, the objection as regards novelty (Article 33(2)PCT) is maintained:

The present application does not fulfil the requirements of Article 33(2) PCT:

2a) D1 (abstract; claims) discloses

- a dark-grey soda-lime glass substrate comprising

- colouring agents (Fe<sub>2</sub>O<sub>3</sub>, Co, Se, Cr<sub>2</sub>O<sub>3</sub>)

(page 5, lines 2-6 and 32-39; examples 6-9 and 11-12)

- the substrate glass exhibiting a selectivity of about 1 (LT/ET=20/20) measured with illuminant A (page 4, lines 43-48), which is

- coated with a pyrolytical coating which increases the selectivity (TL/ET) (page 4, lines 39-45) with respect to the uncoated glass.

As the total energy transmittance of the coated glass according to D1 is very low it is used for cars (page 4, lines 49-52 and 56-61).

The subject-matter of claim 1 of the present application differs from the disclosure of D1 only by the illuminant used for measuring the optical glass properties as e.g. LT, ET ect. which is in the present application illuminant C whereas it is in D1 illuminant A. This explains why the values of the selectivity according to D1 are to be found more at the lower end of the selectivity range according to claim 1 of the present application.



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EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/EP99/09850

The person skilled in the art, who is looking for a glass exhibiting low UV and total energy transmittance in combination with high light transmittance so that the glass can be used as e.g. as a windshield glass in cars, would take the glass according to D1. The difference in the conditions used for measuring the optical glass properties does not install novelty, as the values measured e.g. with illuminant A can be regarded as being equal to the values measured with e.g. the illuminant C. Moreover examples 6-9 and 11 and 12 of D1 are inside the ranges claimed in claim 1 of the present application. Accordingly claims 1, 25-27 of the present application do not fulfil the requirements of Article 33(2) PCT.

2b) As regards the applicant's arguments put forward in connection with D2-D4 it is noted that the applicant cited specific compounds disclosed in the said documents as to demonstrate a difference between the said prior art and the present application. However as the coating and the colorant composition which are used in claim 1 of the present application are not defined, any coating/colorant composition covers the coating/colorants of claim 1 of the present application. Accordingly the objection as regards novelty (Article 33(2) PCT) is maintained:

It is noted that the present application does not fulfil the requirements of Article 33(2) PCT as regards documents D2-D4:

Claims of the present application	see document
1-3,5,23	D2 (page 3, line 38- page 4, line 4; page 5, lines 23-25; examples; claims)
1-3,13-18,22-24,27	D3 (example 2; tables A-C; claims)
1-3,13-18,22,27	D4 (examples; claims) .

3) Even if the subject-matter of the present application were to be amended in such a way as to be formally novel over the disclosures of the cited prior art, the present application would not fulfil the requirements of Article 33(3) PCT as in the light of the teaching of D1 to D4 and D6 (examples, claims) no inventive step can be seen in the subject-matter of the present application.

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**SECTION VIII**

3) The present application does not fulfil the requirements of Article 6 PCT:

3a) Claim 1:

According to claim 1 of the present application the pyrolytic coating provides an **"increased" selectivity**. It is not disclosed a) which selectivity value would be encompassed by the wording "increased " and b) which composition of the coating would be necessary to achieve an "increased" selectivity.

According to claim 1 of the present application the term **"coloured"** is not defined for the soda-lime glass. It is not disclosed which colour is meant and the composition and amount of the **colorants** is not disclosed. The colour, the colorants and their amounts represent essential features for the optical properties of a glass.

Accordingly, the meaning of claim 1 is vague and undefined.

3b) Claim 5

According to claim 5 the proportion of the colouring agents are "such" that specific glass properties are attained. However the term "such" does not define any proportion and accordingly renders the meaning of claim 5 vague.

3c) Claims 9 and 10

According to claims 9 and 10 of the present application are characterised by the result to be attained: The **selectivity is increased** "by at least 3%" (claim 9) or "by at least 10%" (claim 10). However these claims do not disclose any glass and/or coating composition which would cause the increase in selectivity. Accordingly the meaning of claims 9 and 10 is not defined.

3d) Claims 4 and 12

In claims 4 and 12 the coating is defined by the result to be achieved (increase of the transmission ratio transmitted radiation/ incident radiation by at least 3 points for specific wavelength ranges) and thus does not fulfil the requirements of Article 6 PCT.

3e) Claim 13

In claim 13 of the present application the doping agent (2nd possibility) is not defined and thus the meaning is unclear.

3f) Claim 14

In claim 14 of the present application the composition of the underlayer is not defined.

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**3g) Claims 18-26**

Claims 18-26 are defined by the result to be achieved (LR, emissivity, selectivity, dominant wavelength, ect.), however the composition, which would enable a glass exhibiting the claimed glass properties, are not disclosed in the said claims. Thus claims 18-26 of the present application do not fulfil the requirements of Article 6 PCT.

# INTERNATIONAL SEARCH REPORT

Intern. Appl. No.

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<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC 7 C03C3/087 C03C4/02 C03C4/08 C03C17/245 C03C17/34		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) IPC 7 C03C		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used)		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 196 36 301 A (GLAVERBEL) 13 March 1997 (1997-03-13) page 5, line 2 - line 6 page 5, line 32 - line 39 claims; examples 6-9,11,12	1,25-27
X	DE 196 36 303 A (GLAVERBEL) 13 March 1997 (1997-03-13) page 5, line 23 - line 25 claims; examples	1-3,5,23
X	GB 2 302 101 A (GLAVERBEL) 8 January 1997 (1997-01-08) cited in the application claims; example 2; table A	1-3, 13-18, 22-24,27
-/-		
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.		
<input checked="" type="checkbox"/> Patent family members are listed in annex.		
<b>* Special categories of cited documents :</b>		
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>*A* document defining the general state of the art which is not considered to be of particular relevance</p> <p>*E* earlier document but published on or after the international filing date</p> <p>*L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>*O* document referring to an oral disclosure, use, exhibition or other means</p> <p>*P* document published prior to the international filing date but later than the priority date claimed</p> </div> <div style="width: 45%;"> <p>*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>*A* document member of the same patent family</p> </div> </div>		
Date of the actual completion of the international search  <div style="text-align: center; font-weight: bold;">7 April 2000</div>		Date of mailing of the international search report  <div style="text-align: center; font-weight: bold;">18/04/2000</div>
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer  <div style="text-align: center; font-weight: bold;">Kuehne, H-C</div>

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 2 302 102 A (GLAVERBEL) 8 January 1997 (1997-01-08) cited in the application claims; examples ----	1-3, 13-18, 22,27
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A	EP 0 482 535 A (PPG INDUSTRIES INC) 29 April 1992 (1992-04-29) claims; examples ----	1-27
A	EP 0 353 140 A (SAINT GOBAIN VITRAGE) 31 January 1990 (1990-01-31) claims; figures ----	1-27
A	GB 2 248 243 A (GLAVERBEL) 1 April 1992 (1992-04-01) cited in the application the whole document -----	1-27

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